SURGERY

Transobturator tape outcomes

Two new studies address transobturator tension-free tape (TO-TVT) surgery in women with stress urinary incontinence (SUI): the first reports long-term patient-reported outcomes, while the second investigates how surgery might affect sexual function by impairing clitoral nerve innervation.

Transobturator tapes are the most common surgical option for women with SUI. Two procedures are used, termed inside-out (TVT-O) and outside-in (TOT) depending on how the tape is placed. E-TOT (Evaluation of Transobturator Tapes) is a randomized controlled trial established in 2005 to compare the outcomes of TVT-O and TOT procedures; 341 women with SUI who had previously failed or declined pelvic floor muscle treatment were recruited. At 1 year, there was no difference in patient-reported success rates between procedures, although more women who underwent TVT-O reported a clinically significant improvement in quality of life (QOL) than those who had TOT. The E-TOT researchers, based in Scotland, UK, have now evaluated patient outcomes at 3 years.

238 patients (70%) completed follow-up at 3 years, 126 of whom underwent TVT-O and 112 TOT. The success rate—measured using the response ‘very much improved/much improved’ on PGI-I (Patient Global Impression of Improvement)—was 73.1% for the total cohort, revealing a significant drop from success at 1 year (80%; $P=0.005$). There was no difference in success rate between TVT-O and TOT subgroups (73.2% versus 72.3%; OR 0.927; 95% CI 0.552–1.645; $P=0.796$).

An improvement in QOL was defined as a 10-point increase in total KHQ (King’s Health Questionnaire) score, and was reported by 80.3% of women. In contrast to the results at 1 year, there was no difference between groups at 3 years (OR 0.594; 95% CI 0.312–1.132; $P=0.113$). The sexual function questionnaire—Prolapse Incontinence Sexual Function Questionnaire (PISQ-12)—was only completed by 110 women at 3 years (46.2%), 73.6% of whom reported improvement after surgery (5.5% reported no change; 20.9% reported deterioration). Again, there was no difference between the two groups ($P=0.317$). The authors note that QOL and sexual function outcomes in these women should be interpreted with caution because a number of confounding factors can develop during follow-up. For example, the development of prolapse or menopausal vaginal dryness might affect results. For reasons such as these, the existing data on sexual function after tape procedures are conflicting, with some studies suggesting improvement and others deterioration.

The exact mechanisms by which sling surgery might impinge on sexual function are unknown, but it has been hypothesized that damage to vascular or neural tissue could be responsible. A study recently published in the *Journal of Sexual Medicine* has tackled the latter by investigating the neuroanatomy of the clitoris (both histochemically and with dissection) to identify sites of potential nerve damage during tape placement.

The clitoris is innervated by both dorsal nerves of the clitoris (DNC)—peripheral sensory afferents that originate from the pudendal nerve—and cavernous nerves (CN) that derive from the inferior hypogastric plexus. While CN, and their integral role in erectile function, have been extensively studied in men, they have been somewhat neglected in women. Here, the authors report that CN not only surround the urethra but also innervate the anterolateral vagina, and as such are in prime position to be disrupted by all types of sling surgery. In cadaveric studies, researchers confirmed that CN were indeed damaged; however, contrary to previous studies, they found that the DNC (located along the inferior pubic ramus) was not disrupted during TVT-O placement. Clearly, further studies are required before one technique can be recommended over the other.

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Original articles Abdel-fattah, M. *et al.* Prospective randomised controlled trial of transobturator tapes in management of urodynamic stress incontinence in women: 3-year outcomes from the evaluation of transobturator tapes study. *Eur. Urol.* doi:10.1016/j.eururo.2012.04.021 | Bekker, M. D. *et al.* The somatic and autonomic innervation of the clitoris: preliminary evidence of sexual dysfunction after minimally invasive slings. *J. Sex. Med.* doi:10.1111/j.1743-6109.2012.02711.x